

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): An electronic apparatus for executing an operation using an application, the electronic apparatus comprising:

a communicating unit configured to communicate with an external apparatus via a communication line;

a storage unit configured to store identification information unique to one or a plurality of applications;

a plurality of hardware resources configured to provide image processing functions;  
and

a processing unit coupled to the communicating unit, the storage unit, and the plurality of hardware resources,

the processing unit including

a controlling unit configured to execute an operation using an application within the external apparatus by communicating with the external apparatus by the communicating unit when the communicating unit receives from the external apparatus an operation execution request that is issued by the application and requests execution of the operation using the application, the operation providing an image processing function using at least one of the plurality of hardware resources specified by the application;

an authenticating unit configured to carry out, using authentication information that is added to the operation execution request, an authentication process to confirm validity of the operation execution request when the communicating unit receives the operation execution request from the external apparatus, the authentication information including identification information unique to the

application, and the authenticating unit confirming that the operation execution request is valid if the identification information matches the identification information that is stored in the storage unit; and

an operation execution permitting unit configured to permit execution of the operation if the authenticating unit confirms that the operation execution request is valid.

Claim 2 (Previously Presented): The electronic apparatus as claimed in claim 1, further comprising:

a device start notification sending unit configured to send a start notification of the electronic apparatus to the external apparatus by the communicating unit; and

an application information registering unit configured to register information related to a usable application that is added to an application usability notification, when the application usability notification from the external application is received by the communicating unit in response to the start notification sent by the device start notification sending unit.

Claim 3 (Previously Presented): The electronic apparatus as claimed in claim 2, wherein the device start notification sending unit sends the start notification to the external apparatus when a power of the electronic apparatus is turned ON.

Claims 4-8 (Canceled).

Claim 9 (Previously Presented): The electronic apparatus as claimed in claim 1, wherein:

the authentication information added to the operation execution request further includes type information indicating a type of the application;

the identification information stored in the storage unit includes type information; and

the authenticating unit confirms that the operation execution request is valid if the identification information, including the type information added to the operation execution request, matches the identification information, including the type information that is stored in the storage unit.

Claim 10 (Previously Presented): The electronic apparatus as claimed in claim 1, further comprising:

an identification information setting unit configured to set identification information unique to the application with respect to which an access to the electronic apparatus is permitted or rejected; and

an operation execution permitting or rejecting unit configured to permit or reject the execution of the operation requested by the operation execution request, if the identification information unique to the application and added to the operation execution request matches the identification information set by the identification information setting unit.

Claim 11 (Previously Presented): The electronic apparatus as claimed in claim 1, further comprising:

a line type judging unit configured to judge a type of communication line via which the operation execution request is received by the communicating unit; and

an operation execution permitting or rejecting unit configured to permit or reject the execution of the operation requested by the operation execution request depending on a judgment result of the line type judging unit.

Claim 12 (Previously Presented): The electronic apparatus as claimed in claim 1, further comprising:

an execution request judging unit configured to judge whether the operation execution request is a normal request or an abnormal request;

an abnormality counting unit configured to count a number of times the abnormal request is judged by the execution request judging unit; and

an operation execution rejecting unit configured to reject the execution of the operation requested by the operation execution request if a counted value counted by the abnormality counting unit exceeds a predetermined value.

Claim 13 (Previously Presented): The electronic apparatus as claimed in claim 1, further comprising:

a device usability notification sending unit configured to send to the external apparatus a usability notification indicating a usability of the electronic apparatus when the communicating unit receives a connection request from the external apparatus,

wherein the controlling unit executes the operation when an operation execution request that requests execution of the operation using the application within the external apparatus is received from the external apparatus by the communicating unit in response to the usability notification sent to the external apparatus by the device usability notification sending unit.

Claim 14 (Previously Presented): The electronic apparatus as claimed in claim 13, further comprising:

an application information registering unit configured to register information related to a usable application that is added to the connection request, when the connection request from the external application is received by the communicating unit.

Claim 15 (Previously Presented): The electronic apparatus as claimed in claim 13, further comprising:

a second authenticating unit configured to carry out an authentication process to confirm validity of the connection request when the communicating unit receives the connection request from the external apparatus; and

a transmission permitting unit configured to permit sending of the usability notification if the second authenticating unit confirms that the connection request is valid.

Claim 16 (Previously Presented): The electronic apparatus as claimed in claim 15, wherein the second authenticating unit carries out the authentication process using second authentication information that is added to the connection request.

Claim 17 (Previously Presented): The electronic apparatus as claimed in claim 16, wherein:

the second authentication information includes the identification information unique to the application; and

the second authenticating unit confirms that the connection request is valid if the identification information matches the identification information that is stored in the storage unit.

Claim 18 (Previously Presented): The electronic apparatus as claimed in claim 13, wherein the communicating unit carries out a communication sequence for confirming validity of a connection request according to a protocol that is predetermined between the electronic apparatus and the external apparatus when the connection request is received from the external apparatus, and further comprising:

a second authenticating unit configured to carry out an authentication process to confirm validity of the connection request from the communication sequence carried out by the communicating unit; and

a transmission permitting unit configured to permit the device usability notification sending unit to send the device usability notification if the second authenticating unit confirms that the connection request is valid.

Claim 19 (Previously Presented): The electronic apparatus as claimed in claim 18, wherein the second authenticating unit confirms that the connection request is valid if the communication sequence is in accordance with the protocol.

Claim 20 (Previously Presented): The electronic apparatus as claimed in claim 13, further comprising:

a second authenticating unit configured to carry out a second authentication process to confirm validity of a connection request when the communicating unit receives the connection request from the external apparatus; and

a transmission permitting unit configured to permit the device usability notification sending unit to send the device usability notification if the second authenticating unit confirms that the connection request is valid, wherein

the authenticating unit is configured to carry out the authentication process to confirm validity of the operation execution request when the communicating unit receives the operation execution request from the external apparatus in response to the device usability notification sent by the device usability notification sending unit.

Claim 21 (Previously Presented): The electronic apparatus as claimed in claim 13, wherein the communicating unit carries out a communication sequence for confirming validity of a connection request according to a protocol that is predetermined between the electronic apparatus and the external apparatus when the connection request is received from the external apparatus, and further comprising:

a second authenticating unit configured to carry out a second authentication process to confirm validity of the connection request from the communication sequence carried out by the communicating unit; and

a transmission permitting unit configured to permit the device usability notification sending unit to send the device usability notification if the second authenticating unit confirms that the connection request is valid, wherein

the authenticating unit is configured to carry out the authentication process to confirm validity of the operation execution request when the communicating unit receives the operation execution request from the external apparatus in response to the device usability notification sent by the device usability notification sending unit.

Claim 22 (Previously Presented): An electronic apparatus system in which the electronic apparatus of claim 2 and the external apparatus are communicatably coupled via a communication line, said external apparatus comprising:

an application storing unit;

an other communicating unit configured to communicate with the electronic apparatus via the communication line; and

an application usability notification sending unit configured to add information that is related to the usable application and is stored in the application storing unit to the application usability notification before sending the application usability notification to the electronic apparatus by the other communicating unit, when the other communicating unit receives the start notification from the electronic apparatus.

Claim 23 (Previously Presented): An electronic apparatus system in which the electronic apparatus of claim 1 and the external apparatus are communicatably coupled via a communication line, said external apparatus comprising:

an application storing unit;

an other communicating unit configured to communicate with the electronic apparatus via the communication line; and

an operation execution request sending unit configured to send the operation execution request that requests execution of the operation using a usable application stored in the application storing unit to the electronic apparatus by the other communicating unit.

Claim 24 (Previously Presented): An electronic apparatus system in which the electronic apparatus of claim 13 and the external apparatus are communicatably coupled via a communication line, said external apparatus comprising:

an application storing unit;

an other communicating unit configured to communicate with the electronic apparatus via the communication line;



a connection request sending unit configured to send a connection request to the electronic apparatus by the other communicating unit; and

an operation execution request sending unit configured to send the operation execution request that requests execution of the operation using a usable application stored in the application storing unit to the electronic apparatus by the other communicating unit when the usability notification is received from the electronic apparatus in response to the connection request sent by the connection request sending unit.

Claim 25 (Previously Presented): The electronic apparatus system as claimed in claim 24, wherein the connection request sending unit sends the connection request to the electronic apparatus by the other communicating unit when starting the application.

Claim 26 (Previously Presented): The electronic apparatus system as claimed in claim 24, wherein said external apparatus further comprises an operation unit, and the connection request sending unit sends the connection request to the electronic apparatus by the other communicating unit in response to an operation by the operation unit.

Claim 27 (Previously Presented): An electronic apparatus system in which the electronic apparatus of claim 14 and the external apparatus are communicatably coupled via a communication line, said external apparatus comprising:

an application storing unit;

an other communicating unit configured to communicate with the electronic apparatus via the communication line;

a connection request sending unit configured to send the connection request to the electronic apparatus by the other communicating unit; and

an operation execution request sending unit configured to send the operation execution request that requests execution of the operation using a usable application stored in the application storing unit to the electronic apparatus by the other communicating unit when the usability notification is received from the electronic apparatus in response to the connection request sent by the connection request sending unit.

Claim 28 (Previously Presented): An electronic apparatus system in which the electronic apparatus of claim 13 and the external apparatus are communicatably coupled via a communication line, said external apparatus comprising:

an operation unit;

an application storing unit;

an other communicating unit configured to communicate with the electronic apparatus via the communication line;

a connection request sending unit configured to send a connection request to the electronic apparatus by the other communicating unit;

a function inquiring unit configured to inquire an existence of a function specified by the operation unit to the electronic apparatus by the other communicating unit, when the usability notification is received from usable electronic apparatuses in response to the connection request sent by the connection request sending unit;

a device selecting unit configured to select an electronic apparatus capable of realizing the specified function from the usable electronic apparatuses, when an inquiry result is received in response to the inquiring made by the function inquiring unit; and

an operation execution request sending unit configured to send the operation execution request that requests execution of the operation using a usable application stored in

the application storing unit, by the other communicating unit, to the electronic apparatus selected by the device selecting unit.

Claim 29 (Previously Presented): A control method for an electronic apparatus which executes an operation using an application, the control method comprising:

communicating with an external apparatus via a communication line;

executing an operation using an application within the external apparatus when an operation execution request that is issued by the application and requests execution of the operation using the application is received from the external apparatus, the operation providing an image processing function using at least one of a plurality of hardware resources within the electronic apparatus and specified by the application;

carrying out, using authentication information that is added to the operation execution request, an authentication process to confirm validity of the operation execution request when the operation execution request is received from the external apparatus, the authentication information including identification information unique to the application, and the authentication process confirming that the operation execution request is valid if the identification information matches identification information that is registered in advance in a storage unit within the electronic apparatus; and

permitting execution of the operation if the authentication process confirms that the operation execution request is valid.

Claim 30 (Original): The control method for the electronic apparatus as claimed in claim 29, further comprising:

sending a start notification of the electronic apparatus to the external apparatus; and

registering information related to a usable application that is added to an application usability notification, when the application usability notification from the external application is received in response to the start notification.

Claim 31 (Original): The control method for the electronic apparatus as claimed in claim 30, wherein the start notification is sent to the external apparatus when a power of the electronic apparatus is turned ON.

Claims 32 and 33 (Canceled).

Claim 34 (Previously Presented): The control method for the electronic apparatus as claimed in claim 29, further comprising:

setting identification information unique to the application with respect to which an access to the electronic apparatus is permitted or rejected; and

permitting or rejecting the execution of the operation requested by the operation execution request, if the identification information unique to the application and added to the operation execution request matches the set identification information.

Claim 35 (Previously Presented): The control method for the electronic apparatus as claimed in claim 29, further comprising:

judging a type of communication line via which the operation execution request is received; and

permitting or rejecting the execution of the operation requested by the operation execution request depending on a judgement result of judging the type of communication line.

Claim 36 (Previously Presented): The control method for the electronic apparatus as claimed in claim 29, further comprising:

judging whether the operation execution request is a normal request or an abnormal request;

counting a number of times the abnormal request is judged; and

rejecting the execution of the operation requested by the operation execution request if a counted value of the abnormal request exceeds a predetermined value.

Claim 37 (Original): The control method for the electronic apparatus as claimed in claim 29, further comprising:

sending to the external apparatus a usability notification indicating a usability of the electronic apparatus when a connection request is received from the external apparatus,

wherein the operation is executed when an operation execution request that requests execution of the operation using the application within the external apparatus is received from the external apparatus in response to the usability notification sent to the external apparatus.

Claim 38 (Original): The control method for the electronic apparatus as claimed in claim 37, further comprising:

registering information related to a usable application that is added to the connection request when the connection request is received from the external application.

Claim 39 (Previously Presented): The control method for the electronic apparatus as claimed in claim 37, further comprising:

carrying out a second authentication process to confirm validity of the connection request when the connection request is received from the external apparatus; and  
permitting sending of the usability notification if the second authenticating process confirms that the connection request is valid.

Claim 40 (Previously Presented): The control method for the electronic apparatus as claimed in claim 37, further comprising:

carrying out a communication sequence for confirming validity of a connection request according to a protocol that is predetermined between the electronic apparatus and the external apparatus when the connection request is received from the external apparatus;  
carrying out a second authentication process to confirm validity of the connection request from the communication sequence; and  
permitting sending of the device usability notification if the second authenticating process confirms that the connection request is valid.

Claim 41 (Previously Presented): The control method for the electronic apparatus as claimed in claim 37, further comprising:

carrying out a second authentication process to confirm validity of a connection request when the connection request is received from the external apparatus; and  
permitting sending of the device usability notification if the second authenticating process confirms that the connection request is valid, wherein  
the carrying out of the authentication process to confirm validity of the operation execution request when the operation execution request is received from the external apparatus is carried out in response to the device usability notification.

Claim 42 (Previously Presented): The control method for the electronic apparatus as claimed in claim 37, further comprising:

carrying out a communication sequence for confirming validity of a connection request according to a protocol that is predetermined between the electronic apparatus and the external apparatus when the connection request is received from the external apparatus;

carrying out a second authentication process to confirm validity of the connection request from the communication sequence; and

permitting sending of the device usability notification if the second authenticating process confirms that the connection request is valid, wherein

the carrying out of the authentication process to confirm validity of the operation execution request when the operation execution request is received from the external apparatus is carried out in response to the device usability notification.

Claim 43 (Previously Presented): A non-transitory computer-readable storage medium including computer executable instructions, wherein the instructions, when executed by a computer of an electronic apparatus, cause the computer to perform a method comprising:

communicating, using a communicating function, with an external apparatus via a communication line;

executing, using a controlling function, an operation using an application within the external apparatus by communicating with the external apparatus by the communicating function when an operation execution request that is issued by the application and requests execution of the operation using the application is received from the external apparatus by the communicating function, the operation providing an image processing function using at least

one of a plurality of hardware resources within the electronic apparatus and specified by the application;

carrying out, by an authenticating function, using authentication information that is added to the operation execution request, an authentication process to confirm validity of the operation execution request when the communicating function receives the operation execution request from the external apparatus, the authentication information including identification information unique to the application, and the authenticating function confirming that the operation execution request is valid if the identification information matches identification information that is registered in advance in a storage unit of the electronic apparatus; and

permitting, using an operation execution permitting function, execution of the operation if the authenticating function confirms that the operation execution request is valid.

Claim 44 (Previously Presented): The computer-readable storage medium as claimed in claim 43, further comprising:

sending, using a device start notification sending function, a start notification of the electronic apparatus to the external apparatus by the communicating function; and

registering, using an application information registering function, information related to a usable application that is added to an application usability notification, when the application usability notification from the external application is received by the communicating function in response to the start notification sent by the device start notification sending function.



Claim 45 (Original): The computer-readable storage medium as claimed in claim 44, wherein the device start notification sending function sends the start notification to the external apparatus when a power of the electronic apparatus is turned ON.

Claims 46-50 (Canceled).

Claim 51 (Previously Presented): The computer-readable storage medium as claimed in claim 43, wherein:

the authentication information added to the operation execution request further includes type information indicating a type of the application; and

the authenticating function confirms that the operation execution request is valid if the identification information, including the type information added to the operation execution request, matches the identification information, including type information that is stored in the storage unit of the electronic apparatus.

Claim 52 (Previously Presented): The computer-readable storage medium as claimed in claim 43, further comprising:

setting, using an identification information setting function, identification information unique to the application with respect to which an access to the electronic apparatus is permitted or rejected; and

permitting or rejecting, using an operation execution permitting or rejecting function, the execution of the operation requested by the operation execution request, if the identification information unique to the application and added to the operation execution request matches the identification information set by the identification information setting function.

Claim 53 (Previously Presented): The computer-readable storage medium as claimed in claim 43, further comprising:

judging, using a line type judging function, a type of communication line via which the operation execution request is received by the communicating function; and

permitting or rejecting, using an operation execution permitting or rejecting function, the execution of the operation requested by the operation execution request depending on a judgement result of the line type judging function.

Claim 54 (Previously Presented): The computer-readable storage medium as claimed in claim 43, further comprising:

judging, using an execution request judging function, whether the operation execution request is a normal request or an abnormal request;

counting, using an abnormality counting function, a number of times the abnormal request is judged by the execution request judging function; and

rejecting, using an operation execution rejecting function, the execution of the operation requested by the operation execution request if a counted value counted by the abnormality counting function exceeds a predetermined value.

Claim 55 (Previously Presented): The computer-readable storage medium as claimed in claim 43, further comprising:

sending, using a device usability notification sending function, to the external apparatus a usability notification indicating a usability of the electronic apparatus when the communicating function receives a connection request from the external apparatus,

wherein the controlling function executes the operation when an operation execution request that requests execution of the operation using the application within the external apparatus is received from the external apparatus by the communicating function in response to the usability notification sent to the external apparatus by the device usability notification sending function.

Claim 56 (Previously Presented): The computer-readable storage medium as claimed in claim 55, further comprising:

registering, using an application information registering function, information related to a usable application that is added to the connection request, when the connection request from the external application is received by the communicating function.

Claim 57 (Previously Presented): The computer-readable storage medium as claimed in claim 55, further comprising:

carrying out, using a second authenticating function, out an authentication process to confirm validity of the connection request when the communicating function receives the connection request from the external apparatus; and

permitting, using a transmission permitting function, sending of the usability notification if the second authenticating function confirms that the connection request is valid.

Claim 58 (Previously Presented): The computer-readable storage medium as claimed in claim 57, wherein the second authenticating function carries out the authentication process using second authentication information that is added to the connection request.

Claim 59 (Previously Presented): The computer-readable storage medium as claimed in claim 58, wherein:

the second authentication information includes the identification information unique to the application; and

the second authenticating function confirms that the connection request is valid if the identification information matches the identification information that is registered in advance in the storage unit of the electronic apparatus.

Claim 60 (Previously Presented): The computer-readable storage medium as claimed in claim 55, wherein the communicating function carries out a communication sequence for confirming validity of a connection request according to a protocol that is predetermined between the electronic apparatus and the external apparatus when the connection request is received from the external apparatus, the computer-readable storage medium further comprising:

carrying out, using a second authenticating function, an authentication process to confirm validity of the connection request from the communication sequence carried out by the communicating function; and

permitting, using a transmission permitting function, the device usability notification sending function to send the device usability notification if the second authenticating function confirms that the connection request is valid.

Claim 61 (Previously Presented): The computer-readable storage medium as claimed in claim 60, wherein the second authenticating function confirms that the connection request is valid if the communication sequence is in accordance with the protocol.

Claim 62 (Previously Presented): The computer-readable storage medium as claimed in claim 55, further comprising:

carrying out, using a second authenticating function, a second authentication process to confirm validity of a connection request when the communicating function receives the connection request from the external apparatus; and

permitting, using a transmission permitting function, the device usability notification sending function to send the device usability notification if the second authenticating function confirms that the connection request is valid, wherein

the authenticating function that carries out the authentication process to confirm validity of the operation execution request when the communicating function receives the operation execution request from the external apparatus is carried out in response to the device usability notification sent by the device usability notification sending function.

Claim 63 (Previously Presented): The computer-readable storage medium as claimed in claim 55, wherein the communicating function carries out a communication sequence for confirming validity of a connection request according to a protocol that is predetermined between the electronic apparatus and the external apparatus when the connection request is received from the external apparatus, the computer-readable storage medium further comprising:

carrying out, using a second authenticating function, a second authentication process to confirm validity of the connection request from the communication sequence carried out by the communicating function; and

permitting, using a transmission permitting function, the device usability notification sending function to send the device usability notification if the second authenticating function confirms that the connection request is valid, wherein

the authenticating function carries out the authentication process to confirm validity of the operation execution request when the communicating function receives the operation execution request from the external apparatus is carried out in response to the device usability notification sent by the device usability notification sending function.

Claim 64 (Currently Amended): The electronic apparatus as claimed in claim 1, further comprising:

a plurality of internal applications, wherein

the controlling unit is configured to further execute a second operation using one of the plurality of internal applications within the electronic apparatus when a second operation execution request that requests execution of the second operation using the one of the plurality of internal applications is generated within the electronic apparatus, and

the processing unit further includes

an application selecting part configured to distribute data, including commands, received from the controlling unit to a destination based on information added to the data and identifying the destination, and

the application selecting part distributing the data to the external application via the communicating unit if the information added to the data identifies the external application as the destination, and distributing the data to an ~~arbitrary~~ internal application within the electronic apparatus if the information added to the data identifies the ~~arbitrary~~ internal application as the destination.

Claim 65 (Previously Presented): The electronic apparatus as claimed in claim 64, wherein:

the storage unit further stores the plurality of internal applications; and

the application selecting part sends the external application received via the communicating unit to the controlling unit, and sends each of the plurality of internal applications received from the storage unit to the control unit.

Claim 66 (Currently Amended): The computer-readable storage medium as claimed in claim 43, further comprising:

storing a plurality of internal applications in the storage unit within the electronic apparatus;

executing, using the controlling function, a second operation using one of the plurality of internal applications when a second operation execution request that requests execution of the second operation using the one of the plurality of internal applications is generated within the electronic apparatus; and

distributing data, using an application selecting function, including commands, received from a controlling unit of the computer to a destination based on information added to the data and identifying the destination, wherein

the application selecting function distributes the data to the external application via the communicating function if the information added to the data identifies the external application as the destination, and distributes the data to an ~~arbitrary~~ internal application within the electronic apparatus if the information added to the data identifies the ~~arbitrary~~ internal application as the destination.

Claim 67 (Previously Presented): The computer-readable storage medium as claimed in claim 66, further comprising:

sending, using the application selecting function, the external application received via the communicating function to the controlling unit, and sending each of the plurality of internal applications received from the storage unit to the control unit.